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Earliest Forms of Books
and Ancient Libraries

Library Science


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EARLIEST FORMS OF BOOKS

AND ANCIENT LIBRARIES.

by

FLORENCE EMELINE CARTER.

THESIS FOR THE DEGREE OF BACHELOR OF LIBRARY SCIENCE,

IN THE STATE LIBRARY SCHOOL,

in the

UNIVERSITY OF ILLINOIS.

PRESENTED JUNE, 1901.

1901
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UNIVERSITY OF ILLINOIS

3 June 1901

THIS IS TO CERTIFY THAT THE THESIS PREPARED UNDER MY SUPERVISION BY

Florence Emeline Carter

ENTITLED Earliest forms of books
and ancient libraries

IS APPROVED BY ME AS FULFILLING THIS PART OF THE REQUIREMENTS FOR THE DEGREE

OF Bachelor of Library Science

Katharine R. Sharp

HEAD OF DEPARTMENT OF Library science

1892

The following is a list of the names of the persons who have been elected to the office of the President of the University of California for the year 1892. The names are given in the order in which they were elected, and are arranged in alphabetical order of their surnames.

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T A B L E O F C O N T E N T S .

	Page.
Writing	1.
Earliest records prior to libraries	1.
Behistón	2.
Rosetta Stone	3.
Early records found in libraries	3.
Materials	3.
Writing materials	6.
Forms of books	7.
Arrangement of the text	10.
Explorers of ancient countries	10.
Assyrian libraries	11.
Babylonian libraries	13.
Egyptian collections	14.
Greek collections	17.
Pergamean library	18.
Roman libraries	18.
Province libraries	19.
Constantinople libraries	20.
Bibliography	21.
List of Books Analyzed	26.
Question	28.

Strictly speaking perhaps books should be considered only such works as could be placed in a Library, but for the development of the modern book it is necessary to take into consideration whatever has been used to receive ideas of men, and whatever methods have been used to express those ideas either by pictures or symbols.

In the earliest times historic events, and also the literature of a country were transmitted by word of mouth, from one generation to another, as in the case of the Sanscrit Vedas which for generations were transmitted by priests specially trained to memorize it. In time, as the country grew older and its activities increased, it became necessary to resort to other means of preserving these records, and the simplest methods, those nearest at hand, were used.

Writing.

An outline of the development of Egyptian writing, with the addition of the cuneiform characters of the Babylonians and Assyrians, is practically that of all, for it is the foundation of the rest. The first writing, if such it may be called, was the pictorial, merely the pictures of different objects which were to be represented. In time this grew into a symbolic language the hieroglyphic, a figure representing a sound, a syllable, a word or an idea, the style of all monumental sculptures.

Out of the hieroglyphic grew the hieratic, a cursive system used on papyrus for priestly writings.

The final development was the demotic, a species of running hand, derived from the hieroglyphic and hieratic, used on papyrus for the ordinary transactions of the people.

There is a distinction in the manner in which the hieroglyphic and the other two systems. The former are written in horizontal lines or vertical columns and are read from right to left, the latter from left to right.

The cuneiform or wedge-shaped system of writing takes its name from the wedge like form of its characters. They were invented by the Chaldeans and were adopted later by the Assyrians and Babylonians, all of whose inscriptions are in this system.

Earliest records prior to libraries.

Most curious have been the different materials, if the term may be applied, which have been used to receive the history and other records of the country. The walls of caves, of temples and of palaces, the tombs and monuments of Egypt, all of these have been covered with hieroglyphics, and from these inscriptions the history of ancient countries has been obtained.

In the palace of Sennacherib, at Kuyunjik, there were found two miles of sculptured walls, describing the glories of Assyria.

At Philae on the walls of the great temple of Augustus were found many inscriptions which threw light on the history of the town.

It is in Egypt, however, that inscriptions have been found in greatest abundance and on greatest varieties of materials.

The obelisks, pyramids and tombs have given to historians the history of the country, for on these were carved and sculptured for ages, the happenings of a great nation.

Cleopatra's needle, an obelisk of Syenitic granite, sixty-eight feet high, thirty-three hundred years old, brought to Alexandria by Cleopatra from Heliopolis in the year 40, has been a source of much interest and value to the student. Another obelisk which is the most interesting historically of the Ptolemaic tablets was a magnificent granite stela of Ptolemy Philadelphus.

The great pyramids of Egypt contain some of the most valuable records of the country. These extensive structures, built by the different kings of the country as tombs, were made the chronicles of their deeds.

The oldest writing in the world is probably a monument with an inscription in Egyptian hieroglyphics (preserved in the Ashmolean museum at Oxford.) It is the cornice over a false door of a tomb, dating back to 4000 B.C. The important part of the inscription runs along the upper part and relates to offerings made to Send.

Another tomb was discovered in the Nile valley which showed to what extent these homes of the dead were used to record the events of the owner of the tomb or of the country. This tomb was a large mound with long passage ways, the walls of which from top to bottom were covered with hieroglyphic inscriptions.

Behistan.

Curious, interesting and valuable as these inscriptions are, found on the tombs, the pyramids and in the temples and palaces of the different countries, probably the most remarkable of all is one of Darius Hystaspis, King of Persia, about 515 B.C.

Rising abruptly from the plain of the boundary of Persia to the height of 1700 feet, is a nearly perpendicular mountain by the name of Behistan. On the side of this mountain, 300 feet above the plain, with an ascent to it so steep that the engravers must have had scaffolds to reach their work, are the bas-reliefs of Darius and the rebels he crushed, together with a tri-lingual inscription in cuneiform characters in the Median and Babylonian languages. It took Sir Henry Rawlinson three years, 1844-47, to decipher it, with the help of field glasses and at a cost of \$5000.00.

The surface of the rock was carefully smoothed, every crevice or hollow filled with lead and the whole coated with a varnish to protect the inscription from the weather, so that the reliefs are but little injured.

They represent a row of nine persons tied by the neck like slaves, approaching another personage of more majestic stature who treads on a prostrate body of these presumed captives; three wear the flowing robe of the Monarch; the rest, tight, short tunics. Behind the king stand two warriors armed with bow and spear. The whole sculpture is evidently a triumphal memorial, for tablets with the names of the persons referred to are placed over the monarch and the captives so that there may be no mistake.

The inscription gives an account of Darius, his family, his triumphs in war, what he did for his country, the story of the early years of his reign when he overcame the nine rebels and imposters. Not only in this inscription a memorial of Darius' deeds, but also a warning to menacing people who might approach Persia with thoughts of conquest.

Rosetta Stone.

For many years these various inscriptions were thought to be but magical signs and no effort was made to decipher them - then it was believed that they really had some meaning, and attempts were made to read them, but it was not until 1822 that Champallian, a Frenchman, made it possible for the hieroglyphic and hieratic writing to be read. This came about by the translation of the Rosetta Stone, the most valuable discovery for the student of ancient inscriptions. In 1799, during Napoleon's expedition into Egypt, M. Bousard, a French artillery officer, while digging entrenchments around the tomb of Rosetta found a broken piece of black basalt about 3 feet by 2, containing an inscriptions in three different characters. The first or upper part was in hieroglyphic, the second in Demotic, and the third in Greek. The upper and lower parts of the stone were broken and injured, the hieroglyphic having lost about 13 or 14 lines, the Demotic having suffered but little, having lost small portions at the ends of about half the lines, and the Greek being perfect, save for a few words at the very end.

On the surrender of the French at Alexandria a great number of valuable antiquities were handed over to the English. Among them was the famous Rosetta Stone which lay for years before the Egyptian was translated by the aid of the Greek.

It has inscribed upon it a decree of the priests assembled at Memphis B.C.195, recounting the glories of Ptolemy I. and conferring divine honor upon him.

Champallian of France, by comparison, gradually built up a vocabulary and grammar, and has thus opened up to the world the writings and inscriptions of the ancients.

Early records found in libraries.

*Materials.

As varied as the materials used to receive inscriptions have been those to receive writing.

Leaves. In India and the East the leaves of palm trees have been in use for centuries; manuscripts written on palm leaves have been found of late which date back many hundred years. In Europe leaves of not such tough fiber were used.

Bark is better adapted for writing purposes; the inner bark of the lime tree being most suitable - and rolls made from the lime bark have been found which were co-existent at Rome with those made of papyrus.

Linen cloth was used among the ancient Egyptians and also in Rome for certain rituals.

Clay was, next to papyrus and vellum, the most common writing material, and, by the Babylonians and Assyrians, sun dried or burned bricks of clay were almost exclusively used.

* The material, especially as to arrangement, has been taken largely from Thompson, E. M. - Greek and Latin paleography.

Potsherds came ready to hand in Egypt where earthenware vessels were the most common kind of household utensils. They have been found in large numbers inscribed with tax and pay receipts.

Tiles also, upon which alphabets or verses were scratched with the stilus before baking, were used by the Greeks and Romans for educational purposes.

Metals. Precious metals were naturally but seldom used as writing material; but thin plates or leaves of gold or silver were recommended when a person desired to work a charm.

Lead was a very common material and was used at an ancient date. Many tablets of lead have been found at Athens and other places in Greece and some in Italy, in temples and in burial grounds. They were used also in Northern Italy for literary purposes, historical and diplomatic records being transcribed upon them.

Bronze was used by the Greeks and Romans for laws, treaties and other solemn documents.

Wooden tablets were used in very remote times. In many cases they were probably coated if not with wax with some kind of composition, the writing being scratched upon them with a dry point; in some instances, ink was inscribed upon the bare wood. Ancient Egyptians also used tablets covered with a glazed composition capable of receiving ink. Wooden tablets inscribed with the names of the dead are found with mummies; they were also used for memoranda and accounts and in the Egyptian schools.

One of the earliest specimens of Greek writing is a document inscribed with ink on a small wooden tablet now in the British museum, it refers to a money transaction of Ptolemy Philadelphus B.C. 254 or 253. In the British museum there is also a small wooden board painted white and inscribed in ink with 13 lines of the Iliad.

Waxen and other tablets. Tablets as a general rule were coated with wax from the earliest times. They were used for literary compositions, school exercises, accounts or rough memoranda.

The ancient tablets were ordinarily of common wood, such as beach, fir or box, but occasionally more expensive material was used, as in the case of St. Augustine, who refers to his tablets of ivory.

Papyrus had been employed for literary purposes in the time of the 3rd dynasty, some 3800 years before the Christian era. The plant from which the material is made and from which the name is taken, mostly grew in lower Egypt in marshy land or in shallow brooks and ponds formed by the inundations of the Nile, where much pains was bestowed on its cultivation. The right of growing and selling it belonged to the Government, which made considerable profit by its monopoly.

The root is bulbous of about the thickness of a man's arm. It has a bright green triangular stalk growing from 8 to 15 feet high, at the top of which is a large tuft of most delicate filaments, and near the end of each filament bursts forth the flower.

The part of the rush used for making the writing material is, according to Pliny, "the skins between the flesh and the bark of the thick part of the stalk. These are separated from each other by means of a sharp instrument. The skins are finest at the

centre, become coarser as they approach the bark, and the choice which was made of them regulated the quality of the paper."

The strips were made, according to other authorities, by cutting the substance between the flesh and bark into very thin longitudinal slices. These strips, whether made by the separation of skins or by slicing the inner substance, were laid lengthwise on a table until the right width was obtained, then others laid at right angles, and they were moistened by Nile water which cemented and bleached. They were then pressed and dried, and the uneven places were smoothed down with a tooth or shell. In Italy a paste made of fine meal and vinegar or of crumbs of bread and boiling water was employed as a cement, and the paper when the pieces had been pasted together were beaten out with a hammer.

As was said, there are various kinds of papyrus, the best originally being made of the broadest strips.

Charta Hieratica or Augusta, out of flattery to Emperor Augustus, was the first quality; in width 9 1/2 inches.

Charta Livia, the second quality, 9 1/2 inches wide, was named after Augustus' wife.

The name hieratica, descended to the third quality which was 8 inches wide.

Charta amphitheatrica, 6 1/2 inches wide, took its title from the principal place of its manufacture, the amphitheatre of Alexandria.

Charta Fanniana, was apparently a variety which was remade in Rome in the work-shops of a certain Fannius, from the Amphitheatrica, the width of the original being increased through pressure about an inch.

Saitica, the common variety, was 5 3/4 inches wide.

Taeniotica, which was said to have taken its name from the place of its manufacture, but not wider than 5 inches.

The coarsest kind, the common writing paper, the Charta Emporetica, was but 5 inches in width.

Papyrus continued to be the ordinary writing material in Egypt to a comparatively late period, about the middle of the 10th century. In Europe, also, long after vellum had become the principal writing material, especially for literary purposes, papyrus continued in common use for letters and common documents. For purely Latin literature, papyrus was also used in the early middle ages. Papal bulls on this material have survived. In the European libraries there have been many examples of papyrus found.

Papyrus is no longer used, but a few still continue to make it in Sicily as a curiosity, and that now is the only place where the plant is found, it having been entirely exterminated in Egypt.

Skins were in use among the Egyptians at the time of Cheapo in the 4th dynasty, documents written on skins of that period being referred to or copied in papyri of later date. In the British Museum there is a ritual on white leather which dates back as early as 2000 B.C. The Jews used skins for their synagogue rolls and the Persians wrote their histories upon them.

Parchment. The material which finally took the place of papyrus was parchment or vellum, that is, skins prepared in such a way that they would be written upon on both sides. Pliny on the authority of Varro gives the story of his invention as follows:-

"Eumenes II of Pergamum, B.C. 197-158, wishing to extend the library in his capitol was opposed by the jealousy of the Ptolemies, who forbade the export of papyrus, hoping thus to check the growth of a rival library. The Pergamene king, thus thwarted, was forced to fall back again upon skins, and thus came about the manufacture of vellum."

It consists of skins of various animals, sheep, lamb and calves, unhaired, cleaned and dried so as to form sheets of uniform thickness. Both the flesh and the grain side are carefully gone over to clean the surface. Fine parchment for writing is powdered with chalk on the flesh side and carefully rubbed with fine pumice-stone till a velvety surface is raised; all inequalities on the grain side are also removed by paring and by rubbing with fine pumice.

The most ancient vellum was a thin delicate material, firm and crisp, with a smooth and glossy surface. This is usually the character of the vellum of the 5th and 6th centuries. Later, as a rule does not appear to have been so carefully prepared. Besides being very durable it lent itself readily to ornamentation; in the Imperial library at Vienna there is a portion of the book of Genesis in Greek, the vellum colored purple, the writing in silver letters and the illustrations being a series of colored drawings.

Writing Materials.

Instruments.

There was a development of the instruments used in writing along with the development in the materials used. The sharp flint was that used in the stone age, then the bronze and iron stylus, the reed pen, the hair brush, the quill pen which preceded the pen of to-day.

The stylus or stilus was an implement of wood, bone or metal, having a point composed of three unequal facets, used on waxen tablets, the letters being scratched with a sharp point. The other end was fashioned into a knob or flat head wherewith the writing could be removed by smoothing the wax.

Among the specimens of stilus in ivory and bronze at the British museum there are a number which have a sharp projection at right angles to the shaft near the head for the purpose of ruling lines on the wax.

There was a case called the graphiarium, in which the stilus was kept.

Reed or calamus or camea was used for writing on papyrus; the suitable reeds coming chiefly from Egypt. There are some specimens in the British museum, which are cut like a pen. The case in which they were kept was the calamarium or theca calamaria.

Pen or penna is first mentioned by an anonymous historian, it probably coming into use very soon after vellum.

Brushes were small and mounted on sticks of wood, stone, ivory, etcetra. Many of them were made to hold pens to be used in the different colored inks, as well as the brushes, for they were made with rounded cavities, two to fourteen in number. For writing in gold there was brush called Peniculus.

Ink. Black ink, the ordinary writing fluid of centuries, differs in tint at various periods and in different countries; in the early manuscripts it is either black or slightly brown; in time deterioration was very noticeable, for instance in the 15th century the writing is usually faded grey.

The ink which the ancients generally used was made of lamp black mixed with gum, a carbonic ink which possessed the advantage of extreme blackness and great durability, the writing remaining fresh so long as the substance on which it was written existed; it, however, had the disadvantage of not sinking into the paper, and so could be easily removed, by the application of a wet sponge, so that not a trace remained.

In the time of Pliny it was usual to mix vinegar with the ink to make it strike into the paper or parchment and that in some way answered the purpose.

Vitriolic ink, such as we use to-day, was probably adopted soon after. It sinks instantly into the paper, so is secure against water and hard to get out, but is not secure against time, for it gradually fades away.

Inks of other colors were used in the manuscripts of the middle ages, green, yellow and red and purple particularly, but generally only for ornamental purposes, although there are extant to-day entire volumes written in colored inks.

Gold was used as a writing fluid at a very early period on purple stained and also white vellum; the state letters of the Byzantine emperors being written sometimes in gold.

Silver ceased to be used when stained vellum was abolished.

* Forms of books.

Clay tablets. The clay tablets of the Chaldeans, Assyrians and Babylonians were used for business, literary, domestic, in fact, for all purposes; they varied in size from 15 x 9 inches to 1 1/2 inch, usually small as they were less likely to break and much easier to handle, and of varying thickness. The largest tablets were flat, while those smaller were slightly convex. When the tablet was large and to be written on on both sides, it was supported by pegs during the writing.

The writing in the cuneiform characters was done by means of the stylus upon the soft clay; sometimes a cylinder seal was rolled across the body of the writing. The tablet which had been shaped something like a pillow was baked in a kiln and small holes were made in the clay to allow the escape of moisture which would have caused the tablet to crack or bulge. After baking, if it were a document or of much value, it was frequently enveloped in a cover of moist clay, upon which the contents were again inscribed so as to have an exact duplicate of the inside on the exterior. The tablet with its cover was then baked afresh. This had various seals placed on it, sometimes as many as sixteen witnesses making their seal upon it. In case there was doubt as to the contents of the tablet, in case it was believed the outside had been tampered with, these seals could be broken and the envelope removed.

*Taken largely from Thompson, Greek and Latin paleography.

The tablets differed in color according to the degree of baking, many of them are as perfect to-day as they were 3000 years ago. The clay, too, is unusually fine in some of them, being as fine as in some of the best pottery.

In the British museum there are many examples of the famous contract tablets of the Assyrians and Babylonians, each dated with the regnal year of the King and the day of the month, and in many cases the name of the scribe and the place of writing.

Metal Tablets. A diploma of a Roman veteran has been found consisting of two square plates of metal, hinged with rings. The authentic deed was engraved on the inner side of the two plates and was repeated on the outside of the first plate. Through two holes a three-fold wire was passed and bound around the plates being sealed on the outside of the second plate with the seals of the witnesses whose names were also engraved thereon. The seals were protected by a strip of metal, attached.

Cylinders. The foundation cylinders of Assyria are possibly the most interesting of their records. These are cylinders found in the foundations of the Assyrian palaces inscribed with the annals of the King. They are small, about a foot in height, barrel-shaped, hexagonal or round, but some larger, having six, eight or ten sides. They are usually hollow, having two flat ends with a circular hole in each, through which a rod might have been put.

There were similar Babylonian cylinders, which generally contained historic inscriptions. Many examples of these cylinders are to be found in the British museum; there is one of King Nabonidus, king of the new Babylonian empire when Cyrus in 539 B.C. captured the city, defeated Belshazzar, the king's son, and established Persian rule, all of which is recorded on this cylinder. Another tells of the siege of Jerusalem by Sennacherib and the defeat of Hezekiah, King of Judah; on another is told the submission of Manasseh, King of Judah to Esarhadon. One other important cylinder which has been found in Babylon is barrel-shaped, containing five hundred lines of inscriptions, giving an account of the buildings and canals of Nebuchadnezzar.

Wax tablets were used very largely in Greece and Rome. The wood surface was sunk so that there was a raised frame at the edges like a school slate and a thin coating of wax spread over it. These tablets were single, double or of several leaves, and when two or more were fastened together by rings acting as hinges they formed a codex. A codex consisting of two leaves was called diptycha, duplices; of three, triptycha, triplices; and of more, pentaptycha, quintuplices, polyptycha, multiplices. Owing to the ease with which they could be closed, by passing a triple thread, linum, through holes in the boards and sealing it with the seals of the witnesses, they were used for legal documents, conveyances and wills and for correspondence. When used for wills each page was called cera.

Small tablets, codicilli or pugillares were used for short letters, longer letters, epistolae, were written on papyrus.

During the excavations at Pompeii in July 1875, a box containing 127 wooden tablets was discovered. They were deeds connected with auction sales, and receipts for the payment of taxes; they contained the deed under seal and had the duplicate copy open to inspection.

The Roll. The old form of the book was the roll, the Latin volumen. The sheets of papyrus were joined together with paste to form a roll, not more than twenty being the prescribed number, although more than twenty sheets are found. The best sheets were kept for the outside of the roll, the part which received the most wear and tear, the poorer sheets being reserved for the center or end.

A strip of papyrus was often pasted down the edge at the beginning or the end of a roll to give additional strength to the material and prevent tearing.

The roll was rolled on a stick, umbilicus, to which the last sheet of the papyrus was attached. Many of the rolls found at Herculaneum had a central "core" of papyrus. A knob or button usually of bone or wood was affixed to each end of the stick, or instead of the simple knob or button there was a tip called cornu of ivory or some ornamental material, and might be either plain or colored.

The edges, frontes, of the roll were cut down and smoothed with pumice and sometimes colored.

The wrapper of an ordinary roll might be of common papyrus, charta emporetica, or in case of a more valuable work, a vellum cover, stained with color was used, a paenula or traveling cloak as it was commonly called.

To preserve the papyrus from moths, etc., cedar oil was rubbed on it.

It was very injurious to tie the rolls of papyrus together so they were kept in a box or chest which was called the capsula, cista, puteus or scrinium.

Extensive works were arranged in their cases in decades, triads or other sets.

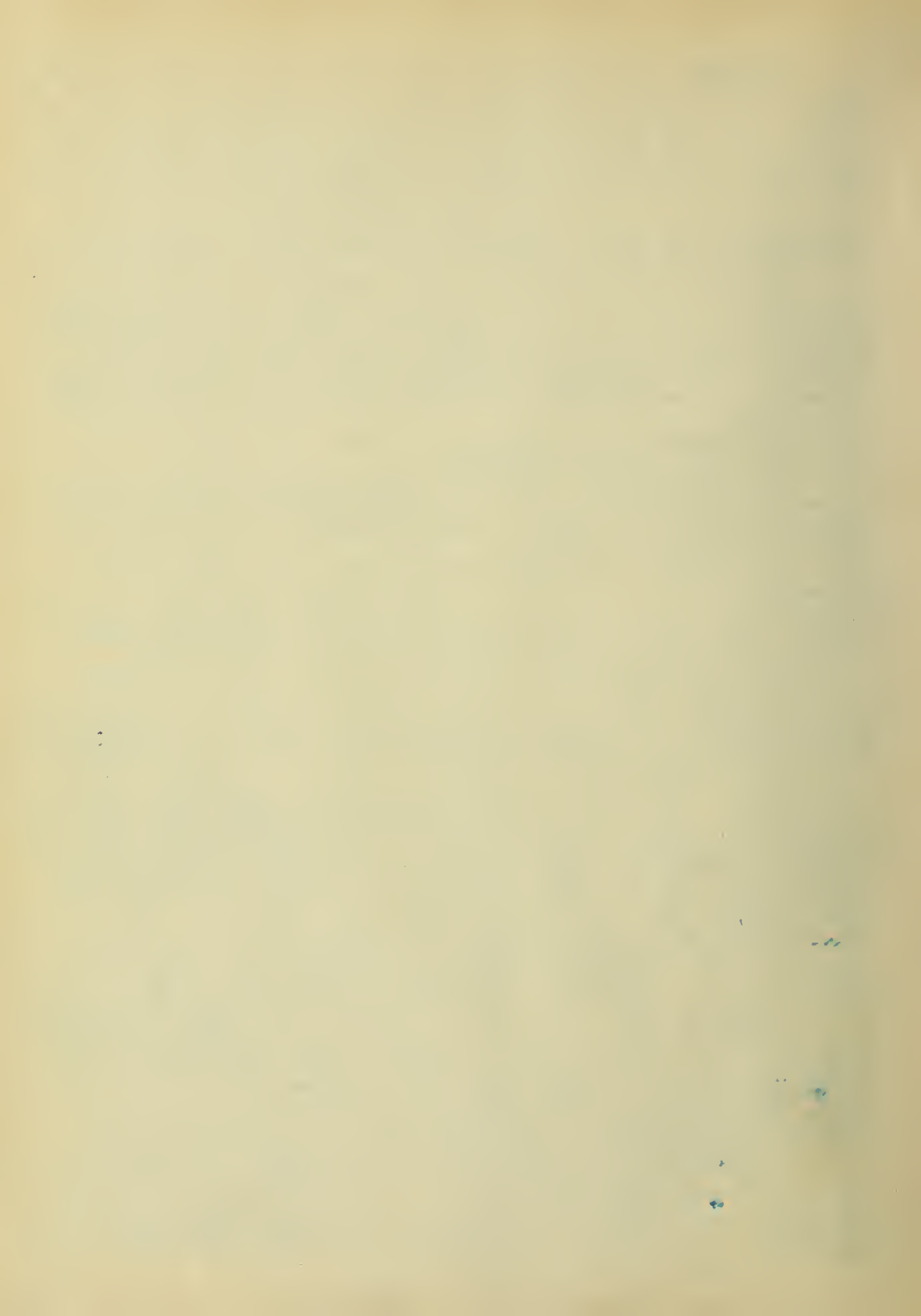
Labels. On the edge of every roll, whether on the shelves or in a box, was fastened a colored vellum label or titulus, upon which was the title of the work.

Text. The text was written in columns or paginae as they were called. The lines of the columns ran parallel with the length of the roll, though before the time of Julius Caesar the official dispatches appear to have written with the lines parallel with the breadth of the roll. The columns as a rule were narrow, though works which were for private use and not for sale sometimes had wide columns. The title of the work was written, as a rule, at both the beginning and the end of the work.

Writing was seldom found on the back of the rolls which were for sale. Children's exercises, or temporary pieces of one kind or another have occasionally been found on the back of papyri.

Codex or book. The earliest form of the book in the modern sense, that is a collection of leaves bound together, existed in the case of the codex of waxen tablets. Thus when vellum books following the same arrangement, were also called codices, similarly the title liber which had been transferred from the original bark roll to the papyrus roll was passed on to the vellum book.

As soon as it was found how conveniently a large work could be contained in smaller space in a vellum book than in the papyrus roll, the vellum codex came into general use, was adopted by the church and spread very rapidly. Finally the book form became so general that papyrus, strengthened by vellum leaves frequently, were put together in leaves as was vellum.



Gatherings or quires. The earliest manuscripts on vellum were usually the broad quarto size, the sheets nearly as broad as they were long. Quires in most instances consisted of eight leaves that is, four folded sheets.

In putting together the sheets for the quires, care was generally taken to lay them so that the hair side faced the hair side and the flesh or inner side faced the flesh side, so that on opening a book, the two pages before the reader had the same appearance. In Greek manuscript the first or lowest sheet was laid flesh side down so that that always formed the first page of the quire. In Latin manuscripts the hair side generally began the quire.

The leaf was called folium, the folded sheet diploma.

Arrangement of the text

In the early manuscripts the text was written continuously without separation of the words, across the face of the page; but as in the majority of papyri rolls the arrangement by columns was usual, separated by red lines. There were ordinarily two columns to a page, but three or four were also allowed, the Codex Vaticanus has three columns to a page in the part containing the old testament.

Palimpsests. The exact meaning of palimpsest is "twice prepared for writing," from an adjective signifying twice rubbed. A palimpsest manuscript then is one from which the first writing had been removed by washing or other process, and the skin again rubbed with pumice, to make the leaves ready to receive the fresh writing. Sometimes this process was repeated and a third text put on it. This method was practiced in early times on papyrus, vellum or on waxen tablets.

Many of the most valuable Latin Texts and the works of classical writers have been found among these palimpsests, having been removed to be replaced by patriotic literature or grammatical works; on the other hand classical works have been written over Biblical texts.

It has been possible to restore some of these manuscripts since they were written originally with vitriolic ink, and the application of the infusion of galls will render them legible.

At the Vatican there are portions of De Republica of Cicero of the 4th century under the work of St. Augustine on the Psalms of the 7th century.

At Milan a work of the 4th or 5th century is covered by a Biblical text of the 9th.

Explorers of ancient countries.

Assyrian Explorers.

We know more of the collections of the Assyrians and Babylonians than of any other nation, because of the material on which the records were kept. Many of the most important tablets or cylinders, so far as the students of ancient Assyria are concerned, those which throw light on the social life of the people have been the contract tablets and foundation cylinders already mentioned, discovered in the ruins, but not in libraries.

Before the exploration of the ruins at Nineveh very little had been known about ancient Assyria and it was not until 1820 when Mr. Rich took up the work that serious efforts had been made

to explore the mounds which later proved so fruitful for discoverers. Following Mr. Rich was Mr. Layard, who was enabled to go at first through the liberality of a private person in England, and later in the interest of the British Museum, which undertook the work. Mr. Layard was followed in the field by Mr. George Smith of the British Museum whose first work was done for the London "Daily Telegraph" whose proprietors offered to advance 1000 guineas for researches at Nineveh, as a result of his translations of the tablets sent to England by Layard. His second journey was possible through the interest of the Trustees of the British Museum who set aside £1000 for the work.

The chief merit in deciphering the Assyrian inscriptions belongs to Sir Henry Rawlinson; besides this he has published many of his translations.

Babylonian explorers.

The work of excavation in Babylonia has been carried on by the French at Tello, south of Nippur and by the University of Pennsylvania expedition. This enterprise was originated by a Philadelphia banker interested in the discoveries of the East, and was taken up by the University under the lead of Dr. Fayer, the provost. Much valuable work was done in the years 1888-90 by the first expedition under the direction of Dr. Peters.

Dr. Hilprecht followed Dr. Peters as the director of the expedition and since 1897 has been at work at Nippur, resulting in the discovery of the great library of the temple at that place.

Egyptian explorers.

Although no libraries have been discovered in Egypt, the explorers of that country are of interest in this connection because of the material they have found which throws light on the life of the people. M. Petrie and M. Naville have been those most active.

Assyrian Libraries.

Assurbanipal.

In 1850, while excavating in the Koyunjik mound, two palaces, one of Sennacherib the other of Assurbanipal, were discovered by Mr. Layard.

In the latter place he found a room, the floors of which, with those of adjoining rooms, were covered to the depth of a foot with clay tablets filled with cuneiform characters, many of them so small as to require a magnifying glass to read them. These tablets varied in size from 1 inch to 1 foot square. A great number of them were broken, and from that and the fact that the different rooms in which fragments of the same tablets were found had no connection with one another, it is believed they had fallen from the second floor.

These tablets from the library of Assurbanipal who was the principal patron of literature of his time, during whose reign the greater part of the library was written. He was fond of old sacred books and collected specimens from the chief cities of the Empire and employed scribes to copy for him the books in the temples of Chaldea and Babylonia.

This library had been transferred from Calah by Sennacherib towards the latter part of his reign; it seems to have been

methodically arranged and catalogued and thrown open to the public. Mr. Jules Oppert, appointed by the French Government to examine these discoveries, was led to the belief that some of the tablets were essentially for the public, prepared at the command of Sardanapalus V for the instruction of his people, from an inscription which he found. "Palace of Sardanapalus... King of Assyria ... The manifestation of the god Nebo, of the god of supreme intellect, I have written it upon tablets ... I have placed it in the midst of my palace for the instruction of my people."

Mr. Layard sent a large box of these tablets to the British Museum, where about 20000 of them were translated by Sir Henry Rawlinson. George Smith became interested in the tablets and translated the cylinders containing the history of Assurbanipal, after which he engaged by the Trustees of the British Museum to assist Sir Henry Rawlinson. The most interesting discovery among this collection was that of the tablets on which was the Chaldean story of the deluge, the first fragment found containing about half of the account. Mr. Smith began a thorough search in the Assyrian library to find the remainder of the story. He found many fragments, and soon ascertained that this tablet was the eleventh in a series of twelve giving the history of an unknown hero named Zhubar. It was the result of this discovery that the offer of the "Daily Telegraph" was made.

When Mr. Smith began his explorations in Nineveh it was over the library chamber found by Layard; for he was convinced by his examination of the collection at the British Museum that not half of the library had been recovered. In the chambers around Layard's library he found about 3000 fragments. Among these was the greater portion of seventeen lines of inscription belonging to the column of the *Deluge story and fitting into the only place where there was a serious break in the story; he recovered many other portions of the inscriptions belonging to the series.

In one place he found a fragment of the history of Assurbanipal, containing new and curious matter relating to his Egyptian wars and to the affairs of Gyges, King of Lydia.

In Sennacherib's palace a small tablet of Esarhaddon, King of Assyria, some new fragments of one of the historical cylinders of Assurbanipal, a cylinder of Sennacherib and numerous clay seals were found.

** The cylinder of Assurbanipal was one of the finest Assyrian historical documents and shows the Assyrian view of the politics of that day.

It is estimated that there were about 30000 volumes in this library, containing works on religion, science, mathematics, astronomy, astrology, geography, a little history; grammars, dictionaries and many school reading books. There were also numerous Accadian texts, with Assyrian texts.

* For sketch and translation see

Smith, George.

Assyrian discoveries, p.165-222.

**For translation, see

Smith, George.

Assyrian discoveries, p.319-76.

There was also a documentary department where were found documents, public and private, deeds, treatises, royal decrees, etc.

The chief librarian was Nebozuqub-yukin who held office for 32 years.

The library of Nineveh suffered at the time of the overthrow of the city. Its papyrus and leather rolls were destroyed but the clay library remained.

Library at Dur-Sarginu.

Assurbanipal had another library at Dur-Sarginu, and although not so well supplied as the one at Nineveh, it was very good. It contained accounts of his wars in Egypt, and his campaigns against the Phoenicians.

Babylonian Libraries.

Telloh.

A library of 33000 tablets was discovered at Telloh, in charge of the French expedition in 1896; formed nearly 5000 years ago, in Telloh, south of Nippur. The largest part of the tablets were sent to Constantinople, a few were given to the Louvre by the Turkish authorities, and the rest were stolen by the Arabs who sell them to travellers.

This library contained inscriptions, chronological lists, historical fragments, astronomical and religious texts, tax receipts, etc.

Nippur.

The expedition of the University of Pennsylvania in 1888-90 under Dr. Peters although unsuccessful, in the search for the temple library at Nippur, discovered many thousand tablets. Near the temple they found a sort of registry of records, thousand of inscribed tablets, for the most part unbaked, which were stored in one room on wooden shelves along the walls, these included, as did most collections found, business records, letters and historical fragments. They also found and explored the mound of Amram or Jinyimeh, the source of most of the tablets and cylinders which have been sent to Europe and America. It had been reported that the Arabs had found a library in this place and that they had broken it up to escape arrest, but upon examination it was found to be but a hole which was merely a deposit of contract tablets.

The second year of the expedition about eight or ten thousand inscribed tablets or fragments of tablets and several hundred inscribed stones were found which, at that time, were the oldest discovered in Babylon or the world.

In 1896 the University expedition, then under Prof. Hilprecht, found some 30000 tablets, belonging, many of them, to the time of the first dynasty of Ur, about 2800 B.C. They were of about the same character as the other tablets found, letters, religious and astronomical texts, building and business records. About nine forgotten or unknown kings were brought back to history through these tablets. Among them were also some very valuable Hebrew and Aramaic tablets which threw much light on Biblical Jewish history.

Another important find of the University party was in 1899

when about 1500 cuneiform tablets, several seal cylinders, and large clay cylinders were found at Nippur.

The discovery which has caused the greatest interest, particularly among students, was that of the oldest library in the world, that of the great temple Bel of Nippur, by the expedition in the spring of 1900. It is 4000 years old and is in the real sense a library, containing not private business contracts, conveyances and the like, but historic, philologic and literary tablets. Tablets which treat of mythology, grammar, lexicography, science and mathematics, in fact a national library. They were arranged regularly around the wall on clay shelves.

In three months' time 17,200 cuneiform tablets were removed most of them being sent to the University, and Prof. Hilprecht estimated that there were probably about 150000 more in the unexplored part, to examine and remove which would take about five years.

This library was of greatest renown the chief glory of the temple in early times, it was the main college of instruction in law and religion.

There is no document of later date than 2280 B.C., which is the date of the invasion of the Elamites, and it is probably the date of the destruction of the library.

It was necessary to suspend the work to continue work on the temple, but no doubt the work on the library will be taken up soon again and more of this remarkably interesting library will be opened up to the world.

A discovery made in 1899 by Dr. Budge, keeper of the Egyptian and Assyrian antiquities in the British Museum, was that of a group of fifty letters written by Kammurabi, King of Babylon, who reigned about 2300 B.C. These are probably the oldest letters in the world, showing the existence of a regular system of correspondence between rulers and their subordinates, and as such one of the most important series of inscriptions ever recovered from Oriental ruins.

Egyptian Collections.

The Egyptians were the first people to write books, but our knowledge of their libraries, where they kept these books is somewhat limited. Every temple and every tomb had its collection and many have the valuable papyri recovered from the latter. All that is known of the history and of the social life of the people has been obtained from the monuments and from these papyri and tablets found, not in the libraries, but in the temples and tombs.

Mr. Petrie, in a little town in Fayum, found many papyri of different dynasties, as well as Greek papyri of Ptolemaic and Roman times. The three oldest Homeric texts came from Egypt, other papyri containing fragments of Sappho, Anacreon, Pindar and Quivothus have been recovered from the graves.

Medical papyri are found in great numbers in Egypt, the finest being the Ebers papyrus bought in 1874 at Thebes by Dr. Ebers and later purchased by the King of Saxony and placed in the Leipsic library.

It consists of 110 columns and has written on the back a double calendar in eight columns; each column is eight inches wide and contains twenty-two lines. The writing which is hieratic is

from right to left, all in black ink, except for the beginnings of chapters, which are in red. This volume was of the 17th century, B.C. but the work itself antedates this.

This chapter treats of the original production of the book which came from the Temple of On at Heliopolis. There are given remedies for various diseases. There is a chapter devoted to the mistress of the house and one to the house itself in which the importance of cleanliness is insisted upon.

Several papyri contain collections of moral precepts, the maxims of Ptah-Lotep being in the famous Prisse papyrus. This papyrus, the oldest in the world, is now in the Bibliotheque Nationale of Paris. It was written by a scribe of the 11th dynasty about 2500 B.C. and contains copies of two much more ancient documents, one of the third dynasty, B.C. 3966-3800, the other of the sixth dynasty, B.C. 3300-3133.

In 1887 a peasant woman of middle Egypt found what are called the Tell Amarna tablets, representing a literature equal to about half the Pentateuch and concerned largely with the political affairs; they have, of course, added greatly to the history of the country and have added a number of kings to the list. There were about 320 of these clay tablets, varying in length from from two inches to one foot in length, a few as large as eighteen inches; greater number were rectangular, a few oval; the writing was cuneiform, usually on both sides and frequently on the edge as well. The longest text was ninety-eight lines; the shortest, ten.

Book of the dead.

This famous book of the Egyptians was a collection of prayers and exorcisms prepared for the benefit of the pilgrim soul in his journey through the Egyptian Hades, and in order that he might have a safe journey through the valley, copies or portions of it were buried with the mummy. It is very probable that one-half or two-thirds of the thousands of the papyri which have existed until now are portions or entire copies of the Book of the dead.

A papyrus, sixty-five feet long, one foot one and one half inches wide, written for a great official who lived about 1650 B.C. by the name of Nu-Pap, was found near Thebes, which contained a most complete and carefully written version of the Book of the dead, as it contains one hundred thirty-one chapters.

"Book of the breathings."

This is a most remarkable papyrus, in length 6 feet 10 inches, of the Roman or Ptolemaic age, compiled by "Kerasher" whose official position is not indicated on the document. It belongs to a series of funeral rituals, such as the Lamentations of Isis, and Hephthys, drawn from various schools of theology to meet the demand for something of the sort after the Book of the dead became unacceptable to the Egyptians under the Greek and Roman rule.

Osymandyas library.

One of the most famous of the Egyptian libraries was that founded by King Osymandyas, identified with Ramses I, in the 14th century B.C., and described as bearing the inscription "Dispensary of the soul." It is supposed to have been in the Ramesseum, the magnificent palace temple near Thebes, on the door jambs of which may still be seen representations of Thoth, the inventor of letters

and the goddess Saf, his companion, with the titles Lady of letters and Presidentess of the Hall of books.

Nothing is told of the books in this library by Diodorus who has **seen** the building, and it is supposed that whatever books there were perished during the Persian invasion.

Memphis.

According to some ancient writers there was a library in the temple of Phtha at Memphis from which Homer was accused of having stolen the Iliad and the Odyssey.

At Memphis, too, there was a great medical library of great antiquity, in existence in the second century before our era when Falen visited there.

Alexandrian libraries.

In Alexandria there was the royal library, or, in reality, two libraries, the most famous and the richest of Egypt.

The Bruchium, founded in the quarter of the city by that name, by Ptolemy Sater in connection with the Alexandrian Museum a society of learned men, about the year 290 B.C., was the most famous. It had a collection of about 400000 volumes, relating to the sciences, to education and morals, consisting, too, of the copies of many ancient writings.

Ptolemy Philadelphus was as great a patron of literature as his father, and after the library Bruchium was filled collected books in the temple of Serapis, which was called the Serapeum library, which at the time of Philadelphus' death contained about 100000 volumes, which amount was increased to 300000 by his successor. He sent into every part of Asia and Greece to secure the rarest and most valuable writings, among those he purchased being the works of Aristotle, which he obtained from Neleus.

Ptolemy Energetes his successor was most unscrupulous in his methods of increasing the library, if what is told of him is true.

*It is said that he caused all books imported into Egypt by foreigners to be seized and sent to the academy or museum where they were transmitted by persons employed for that purpose, upon which the copies were delivered to the owners and the originals deposited in the library. He borrowed of the Athenians the works of Sophocles, Euripides and Aeschylus, caused them to be transcribed elegantly, retained the originals for his own library and returned to the Athenians the copies which had been made of them, with 15 talents, equal to £3000 sterling.

At the time of the first Alexandrian war when Julius Caesar burned his ships in the harbor of Alexandria, the Bruchium portion of the royal library, which stood by the water edge, accidentally caught fire and was destroyed.

When the Bruchium quarter was burned later by Aurelian, any books which escaped the first time, or which had been placed anew in the library, must certainly have perished.

* Edwards, Edward

Libraries and their founders.

For many years it was claimed by some writers that the Serapeum which had been augmented by the Pergamean library of 200000 volumes given to Cleopatra by Mark Antony, was destroyed by the Saracens under the orders of Caliph Omar, when they came into possession of the city in A.D. 638.

It was said that the general Amron was himself inclined to spare this library of ancient learning and science, but the caliph to whom he applied for orders, commanded it destroyed, "for if these writings of the Greeks agree with the Koran they are useless and need not be preserved; if they disagree they are pernicious and ought to be destroyed." The order was obeyed, the volumes of parchment or papyrus were distributed to the four thousand baths of the city, and so great was the number that it took six months to burn them.

The theory as to the final destruction of the Alexandrian library is not held by writers of to-day, for, in the first place, the Temple of Serapis was destroyed 250 years before by Theophilus, Patriarch of Alexandria, and it is reasonably certain that the library was then pillaged or destroyed. Oesius, a contemporary writer himself, saw the empty shelves when he visited Alexandria.

The Serapeum in which the books had been stored was later razed to the ground by order of the Emperor Theodosius, when any stray volumes must certainly have been disposed of. Then, no historian, either Pagan or Christian, who lived at or near the time of the Saracen conquest of Alexandria, or who was present at the capture of the city ever mentioned the burning or demolishing of the library. The Christian writers would surely have done so, in criticism of the Saracens, and the Moslem historians would have been likely to praise the action of the caliph.

Then Entychuis, a scholar, also a Patriarch of Alexandria, describes in his history the taking of Alexandria, but does not mention the library, the loss of which would, doubtless, have meant much to him. Also Amru, the general who captured the city, in his report makes mention of the palaces, baths and theatres, but no libraries.

The story of the destruction of the library by order of Omar first appeared in a book of traveller's tales by Abd-al-Latif, who wrote five hundred years after the supposed event. The tale probably originated from a statement by Ibn-Khaldoun, who wrote 460 years than Entychuis, to the effect that the Moslems burned a library, but he does not tell where. It is quite likely that they burned one in Persia, which might have been confused with the one at Alexandria.

At any rate, to-day we have but stories about this royal library, its foundation, its contents, and ultimate end, instead of any of the records as we have from the libraries of Assyria and Babylonia.

Besides these great libraries there was a third in Sebasteum or temple of Augustus, and the fourth of much later date was connected with its "school."

Greek Collections.

The earliest collection of books among the Greeks were in the temples of the gods as was the general case in all ancient

countries. Although it is quite certain that there were numerous libraries both in the temples and outside of them, there is no sure knowledge concerning them. A very few Greek manuscripts and waxen tablets have survived, but they have been recovered mostly from Egypt.

The manuscripts found were chiefly magical formulae, leases, wills, and so forth, but a few classics were found as well, fragments of Plato, Homer, Thucydides, Euripides and Demosthenes. The tablets were covered with grammatical exercises.

It is claimed that Pisistratus was the first to found a public library in Athens, in which he is said to have deposited the works of Homer which he secured with much difficulty and at great expense.

Pisistratus was a patron of literature it is known, but the story of his founding a library is merely conjectural, as is of course the fortunes of this library as they are related. It was taken to Persia by Xerxes, brought back by Selencus Nicanor, plundered by Sylla, and at last destroyed by the Emperor Hadrian.

There is another story concerning the libraries of Greece for which there is just as much authority. It is related that when the Goths in A.D. 260 ravaged Greece and sacked Athens they had collected all the libraries and were about to set fire to them when, one of their chiefs, interposing, dissuaded them, observing that as long as the Greeks were addicted to the study of books they would never apply themselves to that of arms.

Aristotle, is claimed by Strabo to have been the first known collector of a library in Greece, and it was said that to him was due the honor of having suggested to the Ptolemies the formation of the Alexandrian library. He bequeathed his library with many of his own writings to Theophrastus who made several additions to it and who bequeathed it to Neleus. Later the collection was carried to Scipsis where it fell into disorder and was finally hid in a cave to escape the Pergamean kings.

Pergamean library.

In spite of the restriction of the export of papyrus by the Ptolemies, the library founded and increased by the successive kings of Pergamus, flourished and became rich. At the time of its transportation to Egypt by Mark Antony to be the foundation of a new library in Alexandria it numbered some 200000 volumes.

Roman libraries.

Libraries are not heard of in Rome until the last century of the republic. The collections of Carthage, which fell into their hands in 146 B.C., did not attract them and they were donated to the knights of Africa.

The first libraries were brought to Rome as spoils of war, the earliest collection probably being that of

Aenilius Paulus about 168 B.C., who brought from Macedonia the library of the conquered king Perseus.

Sylla in 86 B.C. added to this collection that of Apellicon brought from Athens.

Lucullus was another successful soldier who during his campaigns made a large and choice collection, which was open to his

friends and men of letters. The Greeks who visited Rome visited the galleries of Lucullus in great numbers.

Cicero, Atticus and Varro were active book collectors, but neither their libraries nor those of Sylla or Lucullus were in any sense public libraries.

Among the different projects which Julius Caesar had formed for Rome was that of a public library, which should contain the largest possible collection of Greek and Latin works. He had assigned to Varro the duty of selecting and arranging them, but before the plan could be carried out Caesar was assassinated.

The first foundation of such an institution was ascribed to Ascinus Pollio, who is said to have defrayed the expenses of the library by his Illyrian campaign.

The honor really belongs, however, to Augustus, who established two libraries, the Octavian and Palatine.

The Octavian library, which was named in honor of the Emperor's sister, was founded in the portico of Octavia in 33 B.C. Melissus was put in charge of the books. During the reign of Titus, when the great fire raged in Rome, it is very probable that this collection of papyri and parchment books was destroyed, if not then, it at all events perished in the fire during the reign of Commodus. That it was destroyed by order of Pope Gregory the Great is not credited.

The Palatine library, in charge of Pompeius Macer, was attached to the temple of Apollo which he had erected on that part of the Palatine house which had been struck by lightning. It consisted of two separately administered departments, Greek and Latin.

Tiberius, the successor of Augustus, although not noted as a patron of literature, enlarged the libraries in Rome and founded the Tiberian library in his own palace in which he placed the works of his favorite Greek poets.

Vespasian, after the burning of Rome by Nero, established a library in the Temple of Peace.

Domitian, in the beginning of his reign, restored at great expense the libraries, which had been destroyed by the fire. He collected books from all quarters, sending his scribes to Alexandria to transcribe volumes in that library. In the reign of Commodus the Domitian library was consumed by lightning, it was restored by Gordian who added the collection amounting to about 62000 volumes which had been bequeathed to him by Quintus Serenus Sammonicus.

Province libraries.

There were other than the imperial libraries, those to which the people of the provinces had access, in the cities and colonies. A library was founded by Pliny, and it is said that the Emperor Tacitus had the works of his name-sake as well as those of other writers placed in libraries for the use of the people outside of the city of Rome.

Constantinople libraries.

In 330 A.D. Constantine the Great made Byzantium the seat of his empire, called it after his own name, and in every way tried to remedy the injuries suffered by the Christians during the reign of his predecessor Diocletian. One of the most important things of his reign was the founding of the Constantinople library which he formed by collecting whatever books he could find which had escaped destruction by Diocletian, and by collecting others from various quarters.

There were but about 6900 volumes in the Imperial library, at the time of Constantine's death, but it was enlarged by Emperors Julian and Theodosius the younger who increased it with 120000 volumes.

About half of this number were burned in the seventh century by Emperor Leo III in his effort to do away with the worship of images.

It was in the library that the only authentic copy of the proceedings of the Council of Nice was to be found. It is said also to have contained the poems of Homer written on parchment, in golden letters, and a copy of the Four Gospels, bound in gold and enriched with precious stones, both of which volumes were destroyed in the fire ordered by Emperor Leo.

Books were plentiful in ancient times and there were not a few libraries, even public ones; but when the barbarians invaded the western empire, the institutions of learning, including the libraries, almost entirely disappeared and for many decades it was to the monasteries that the scholars had to look for books.

READING LIST

O N

EARLIEST FORMS OF BOOKS AND ANCIENT LIBRARIES.

Abbott, Ezra. - Ancient papyrus. (see Library Journal, Nov. 1878, 3; 323-24.)

A fairly good, brief account of ancient papyrus and the mode of making paper from it.

Ancient libraries. - (see Larned, J.N. History for ready reference, under Libraries :2000-2006.)

Excellent and authoritative. Gives extracts from various authorities.

Becker, William Adolph. - The library; the book; the book sellers. (see his Gallus; p. 322 - 37.)

Roman scenes of the time of Augustus. Gives short good accounts of the forms of the book, descriptions of the library and of the booksellers and their business.

Bookselling and libraries. - (see his Charicles, p. 272 - 76.)

Account of the libraries and book trade of the ancient Greeks. Very similar to the accounts in Gallus.

Brassington, W. Salt. - Earliest records of prehistoric man. (see his History of the Art of Book Binding, p. 1-6.)

_____ Babylonia and Assyria. (see his History of the Art of Book Binding, p. 7-16.)

_____ Egyptian Records. (see his History of the Art of Book Binding, p. 17-25.)

_____ Greek and Romans. (see his History of the Art of Book Binding, p. 26-49.)

A most excellent, authoritative and interesting account of the early forms of books under the above titles. Well illustrated.

Brugsch - Bey, Henry. - History of Egypt under the Pharaohs. Ed. 2, 2.v. N.Y. 1881. Scribner \$12.00.

Derived entirely from the monuments. Very good in showing how extensively the monuments were used as records of historical events.

Discoveries in the ruins of Nineveh and Babylon. -
(see Living Age, 14 May 1853, 37 : 423 - 27.)

Review of Mr. Layard's book by that name, the result of his second expedition. Gives a very good idea of the book.

Edwards, Amelia B. - Kinds of papyrus found in Egypt (see her Pharaohs, Fellahs and Explorers, p. 196 - 97; 218 - 19.)

Brief but good account.

Hieroglyphic writing of the ancient Egyptians.
(see her Pharaohs, Fellahs and Explorers, p. 234 - 59.)

Edwards, Edward. - Ancient libraries of Egypt, Judea, Greece and the Roman Empire. (see his Libraries and Founders of Libraries, p. 3 - 21.)

Very good account of early libraries. Not very easy reading, but valuable.

Libraries of the ancients. (see his Memoirs of Libraries, p. 8 - 56.)

Very good account. Includes passages from the Latin and Greek relating to ancient libraries.

Destruction of libraries and researches which have been made for their fragments. (see his Memoirs of Libraries, p. 57 - 79.)

Good account of the researches up to 1859.

Elton, Charles Isaac & Mary Augustus,
Classical book-collectors. (see Elton, C.I. & M.A. Great book collectors. p. 1 - 12.)

Gives brief survey of early libraries.

Hebrew Manuscripts found in Palestine. - (see Living Age, 23 Dec. 1899, 223 : 762 - 69.)

Ink. - (see Edinburgh Review, Dec. 1828, 48 : 366 - 70.)

About the best description of the method of making ancient ink. Also gives an excellent description of manuscripts called Palimpsests.

Layard, Austin Henry. - Discoveries among the ruins of Nineveh and Babylon, Ed.2. N.Y.1875. Harper, \$1.75.

----- Nineveh and its Remains. Land. 1848 - 49.
Murray. 36s.

Very good interesting accounts of the manner in which the excavations were carried out, and the results of the excavations.

Madan, Falconer. - Materials for writings and forms of books. (see his Books in Manuscript, p. 5 -17.)

Very good account, not so exhaustive as Thompson.

Mariette - Bey, Alphonse. - Clay tablets found in Egypt. (see his Monuments in Upper Egypt, p. 324 - 28.)

Quite good account.

----- Rosetta Stone, (see his Monuments in Upper Egypt, p. 56 - 57.)

Very good short account of the stone and its discovery.

Maspéro, G. - Clay Tablets, (see his Life in Ancient Egypt and Assyria, p. 224 - 26.)

Short description of the Assyrian clay tablets and some of their uses. Also gives description and illustrations of their seals.

Medical Papyri - (see Popular Science Monthly, Dec.1873, 4:251-52.)

Description of the medical papyri found at Thebes by Dr.Ebers and now in the Leipsic library.

Nippur - The oldest city in the world, (see Living Age, 21 July, 1897, 214 : 277 - 80.)

Discussion of the Pennsylvania expedition in 1880 - 1890.
Very good.

Oldest letters in the world, - (see Scientific American Supplement, 24 Nov. 1900, 50 : 20818.)

An account of the envelope or duplicate tablets found by Dr. Budge of the British Museum; a group of 50 letters, said to be the oldest in the world.

✓ Oldest Library in the world, - (see Scientific American Supplement, 22 Sept. 1900, p. 20679.)

Account of the discoveries at Hippiur, in the Spring of 1900, by the Pennsylvania expedition under Hilprecht.

On Waxen Tablets with the Fables of Babius -
(see Journal of Hellenic Studies, 1892 - 93,
13 : 293 - 318.)

Description and facsimilies of wax tablets found at Palmyra.

Papyrus - (see Scientific American Supplement, 23 Sept. 1899,
48 : 19847 - 48.)

Very good description of Egyptian papyri now in the British Museum.

Papyrus - (see Living Age, 22 Sept. 1855, 46 : 767 - 68.)

Very good description as given by Pliny.

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Excellent account of the preparation of the skins.

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Very good discussion of the question.

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Very good account of the explorations in Babylonia, and of some of the tablets recovered.

Rosetta Stone - (see Living Age, 14 May, 1892, 193 : 414 - 18.)

Very good account and description of the stone, and of the manner in which the Egyptian monuments were read.

Rosetta Stone - (see Harper's Monthly Magazine, Dec. 1856,
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Good short account of the stone with the translation; also an account of Egyptian alphabets and writings.

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Very good, thorough account of explorations and discoveries on the site of Nineveh during 1873 - 74 by the author. Gives many illustrations, examples and translations of tablets found.

Tedder, Henry R. - Ancient libraries, (see Encyclopaedia Britannica, Art, Libraries, 14 : 509 - 11.)

Excellent authoritative account.

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Very good account.

Materials used to receive writing. (see his Handbook of Greek and Latin Palaeography, p. 12 - 47.)

Writing implements, (see his Handbook of Greek and Latin Palaeography, p. 48 - 53.)

Forms of books, (see his Handbook of Greek and Latin Palaeography, p. 54 - 77.)

Interesting reading, well arranged for easy reference, authoritative.

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Wheatley, Leonard. - Assyrian libraries, (see Library Journal, Sept. 1880, 5 : 266 - 67.-

Quite good general account of Assyrian libraries, the form of tablets, &c.

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Gallus. Phil. 1866. Lippincott.
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Maspéro, G.
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Thompson, E.M.
Handbook of Greek and Latin Palaeography.
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Vaux, W. S. W.

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N. Y. 1875. Scribner. \$1.00.

Q U E S T I O N S .

1st. Trace the developement of the book from the earliest records to the use of parchment; mentioning the various materials used.

2nd. Describe the Rosetta Stone. What is its importance?

3rd. Describe the rock Behistan.

4th. Describe the writing materials of the ancients.

5th. Tell what you can about the various forms in which books have been made.

6th. Give an account of the Assyrian libraries, particularly that of Assurbanipal.

7th. Give an account of the explorations at Nippur, and the results.

8th. Tell what you can about the Alexandrian libraries.

9th. Give sketch of the libraries of Constantinople.

10th. What would you say, in general, as to the contents and conditions of the libraries of the ancients?



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